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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,478	03/30/2004	Paul R. Austin	D/A2120	3268

7590 10/10/2007
Ortiz & Lopez, PLLC
P.O. Box 4484
Albuquerque, NM 87196-4484

EXAMINER

KO, TONY

ART UNIT	PAPER NUMBER
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2878

MAIL DATE	DELIVERY MODE
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10/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.		Applicant(s)	
	10/812,478		AUSTIN, PAUL R.	
	Examiner		Art Unit	
	Tony Ko		2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/12/07 has been entered.

Specification

2. The disclosure is objected to because of the following informalities: paragraphs are not number on pages 12 and 13.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 11 and the subsequent dependent claims are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the

inventor(s), at the time the application was filed, had possession of the claimed invention. The newly amended claim "transmitting light ... directly through one or less element" cannot be found in applicant's disclosure.

5. Claims 1, 11 and the subsequent dependent claims are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant claims "transmitting light with one or less element to said at least one other light sensor or with one or less turns at another reflection point from said at least one other light source directly through said one or less element to said at least one sensor wherein said one or less element comprises a mirror." Applicant's disclosure does not teach how light can be transmitted through a mirror.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 11, 16 and the subsequent dependent claims are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what does "directly through" mean in claim 1 and 11. Does it mean (1) the light pass through the mirror or does it mean (2) the light is transmitted directly through (via) the mirror. Neither definition seems to make sense. In applicant's disclosure, applicant teaches a mirror guides light and fails to teach how light is transmitted through a mirror

therefore (1) does not seem reasonable. The second definition does not make sense since directly means from point to point without deviation; the light would not be transmitted directly to the sensor if a mirror guides the light, which deviates the course of the path. Clarification is required.

8. Furthermore, it is understood that if the light is transmitted from light source directly to the sensor then there shouldn't be any turns. Applicant claims the data (in this case some type of modulated light) is directly transmitted with one or less turns. The light can only be directly transmitted (with no turns) or the light is indirectly transmitted (with one turn). Which one is it? Clarification is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 7, 11 are 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Ozeki (U.S. Patent 6,317,242).

3. Regarding claims 1 and 11, as understood, Ozeki discloses (Fig. 1) a method, comprising: associating at least one light source (42a) and at least one light sensor (42b) with at least one component (40) of a data processing system; at least one other light source (42a) and at least one other light sensor (42b) associated with at least one other component (40) of said data processing system; and wherein data is

communicated directly between said at least one component and said at least one other component of said data-processing system by transmitting light with one or less turns at a reflection point from said at least one light source directly through one or less element to said at least one other component of said data processing system by transmitting light from said at least one light source to said at least one other light sensor or one or less turns at a reflection point from said at least one other light source to said at least one sensor wherein said one or less element comprises a mirror. (Figure 1 shows the transmission of signal with zero turns (which anticipates one or less turns) from the emitters to the receivers with zero element (which anticipates one or less component)

4. Regarding claims 2 and 12, Ozeki discloses (Fig. 1) at least one light path patch established between said at least one component (1a) and said at least one other component (1b) of said data-processing system in order to communicate data by light among said at least one light source (2a), said at least one sensor (7a), said at least one other light source (2b) and said at least one other sensor (7b).

5. Regarding claim 7, Ozeki discloses (Fig. 1) aligning said at least one component directly opposite said at least one other component in order to form at least one direct light path between said at least one light source (42a) and said at least one other sensor (42b) and said at least one other light source and said at least one light sensor.

Claim Rejections - 35 USC § 103

Art Unit: 2878

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orino in view of Ozeki.

8. Regarding claim 16, Orino discloses (Fig. 1) a system comprising: at least one light source (2a) and at least one light sensor (7a) associated with at least one component; at least one other light source (2b) and at least one other light sensor (2b) associated with at least one other component, wherein data is communicated between said at least one component (1a) and said at least one other component (1b) of said data processing system by transmitting light from said at least one light source (2a) to said at least one other light sensor (7b) or from said at least one other light source to said at least one sensor (7a); at least one light path established between said at least one component and said at least one other component of said data-processing system in order to communicate data by light among said at least one light source, said at least one sensor, said at least one other light source and said at least one other sensor; and at least one mirror (4aa) located at the end of said at least one light path in order to guide light emitted directly from said at least one light source to said at least one mirror and thence directly to said at least one other light sensor and light emitted directly from said at least one other light source to said at least one mirror (4aa) and thence directly to said at least one light sensor. Orino does not teach the optical communication device

(which includes 1a and 1b) are part of a data-processing system. Ozeki teaches optical communication devices to be implemented in a data-processing system (100). It would have been obvious to a person of ordinary skill in the art at the time of the invention to implement optical communication devices in a data-processing system to achieve compact design by eliminating the wires required.

9. Regarding claim 18, Orino discloses at least one component located perpendicular to said at least one other component in order to form a perpendicular light path between said at least one light source and said at least one other sensor and said at least one other light source and said at least one light sensor, wherein said perpendicular light path is guided by said at least one mirror (4aa).

10. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orino in view of Ozeki further in view of Kim (20020021855).

11. Regarding claim 19, Orino in view of Ozeki discloses the invention set forth above. Orino in view of Ozeki does not teach the use of LED. Kim discloses the use of LED (Col. 4, Lines 50-55). It is well known to use LED as a light source. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use LED as light source to improve the reliability of the light source.

12. Regarding claims 20, Orino in view of Ozeki discloses the invention set forth above. Orino in view of Ozeki does not disclose the use of VCSEL (Col. 4, Lines 55-60). Kim discloses the use of VCSEL. It is well known to use VCSEL. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use VCSEL to increase the amount of signal to be sent within a given amount of time.

Response to Arguments

13. Applicant's arguments filed 9/12/07 have been fully considered but they are not persuasive. Regarding claim 1, applicant argues Ozeki does not disclose the light transmission is direct from a light source to a light sensor. In figure 1 of Ozeki clearly disclose the direct transmission between a light source to a light detector. Applicant argues the light are transmitted within the optical bus which does not constitute a direct transmission. However, base on Merriam-Webster's definition of direct (front one point to another point with deviation), Ozeki clearly anticipates claim 1. That is, since there are no obstacles between the path from light source to the detector, a direct transmission is present.

14. Regarding claims 16, applicant's argument is moot in view of the new rejection.

Conclusion

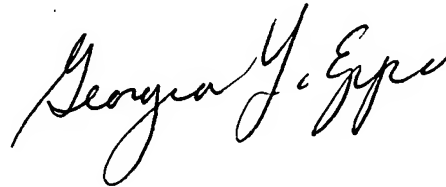
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Ko whose telephone number is 571-272-1926. The examiner can normally be reached on Monday-Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 571-272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2878

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TKO

A handwritten signature in black ink, reading "Georgia Epps". The signature is written in a cursive, flowing style.

Georgia Epps
Supervisory Patent Examiner
Technology Center 2800